Over the past decade, voluntary programs have played an increasingly important role in environmental management and pollution control. Yet existing voluntary programs—several of which have a track record dating back a decade or more—have been subject to only limited empirical evaluations. Among these evaluations, most rely either on before-after studies of participants, or on gross comparisons of emission outcomes between participants and non-participants that are likely to be biased. The decision to participate may not be random (e.g., exogenous) and, in particular, may be correlated with the outcomes.

Our paper uses plant-level data from the the Census of Manufactures and Annual Survey of Manufactures to evaluate the Climate Wise program with particular attention to this selection problem. Climate Wise is a voluntary program with the non-utility industrial sector developed by the U.S. Environmental Protection Agency (EPA) to encourage the reduction of carbon dioxide ($CO_2$) and other greenhouse gases (GHGs) in that sector. Using energy use as a proxy for $CO_2$ emissions, we measure the performance of participants and non-participants before and after program inception. To address the selection problem, we use both propensity score and Heckman-style approaches to alternately correct for selection on observable and unobservable variables.

Initial results using a control group matched on propensity score suggest the absence of any programmatic effect. These results, however, do not control for possibly different growth rates (versus levels) among participants and non-participants prior to the program. We will incorporate into the final paper this adjustment, the Heckman-style results (using proximity to an EPA office as the excluded variable), and other comments received during recent presentations.